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09/824,694	04/03/2001	Sean Allen Johnson	5003397-100	9675

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Kimberly B. Gatling
Smith Helms Mulliss & Moore, L.L.P.
P.O. Box 21927
Greensboro, NC 27420

EXAMINER	
PHAM, HUNG Q	

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/824,694	JOHNSON ET AL.	
	Examiner	Art Unit	
	HUNG Q PHAM	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/21/2004 has been entered.

Response to Arguments

2. Applicant amended claims 1, 14 and 22 in the amendment filed on 04/21/2004. Applicant's arguments have been fully considered but they are not persuasive.

(a) As argued by applicant on page 9, lines 10-11:

> *A plurality of content repositories is not a plurality of database system, such as those database system taught by Machihara.*

Examiner respectfully traverses because, as disclosed by Machihara, within each database system is a database or ***content repository*** (Col. 7, Lines 49-52).

(b) As argued by applicant:

> *The language analysis and information location retrieval sections 120, 130 do not indicate a plurality of bridges that translate the user request into a language understood by the plurality of database, such as SQL.*

Examiner respectfully traverses because of the following reasons:

As recited in claim 1, ***a plurality of bridges that translates the user request into format understandable by the plurality of content repositories***. The Machihara information location retrieval sections 120, 130 translate the user request into a language understood by the plurality of database, such as SQL. And this technique meets the requirement of the bridges for ***translating the user request into format understandable by the plurality of content repositories***.

(c) Applicant's argument with respect to the new added features in claims 1, 14 and 22 will be detailed in the following actions.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1-3, 6, 9, 10, 14-16, 18-20, 22-24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machihara et al. [USP 6,233,578 B1] in view of Elmasri et al. [Fundamentals of Database Systems].**

Regarding to claims 1, 14 and 22, Machihara teaches methods and systems for retrieving information, specified by an information searcher, from a plurality of different database systems, which are connected to a communication

network (Col. 1, lines 5-11). As shown in FIG. 2, a plurality of databases within database systems is connected to the communication network (Col. 5, lines 55-56, Col. 7, Lines 49-52) as ***a plurality of content repositories***. As shown in FIG. 3, the information resource dictionary 170 manages the metadata and content of the database system (Col. 7, lines 34-38) by using relational tables as in FIG. 4. The information resource dictionary 170 supports the interface section 110 serves as the communication interface for the user as ***a client application program interface*** to access (Col. 8, Lines 26-30), search (Col. 8, Lines 31-35) and display (Col. 8, Lines 11-15) an information retrieval request. As shown in FIG. 8, a user enters search conditions indicating that he wishes to search for sumo-wrestlers who were born in Tokyo city and display the results in a spreadsheet format (Col. 9, lines 31-44) as ***a request to access, search and display content and metadata properties***. In short, the technique as discussed above performs the claimed ***a client application program interface (API) that is configured to generate a user request to access content and metadata properties in a plurality of content repositories***. The retrieval conditions specified by the user and the requested items expressed in the retrieval content are analyzed so that user's words familiar to the user are converted into system words that can be recognized by the relevant database systems by the language analysis section 120 (Col. 6, lines 40-46; Col. 7, lines 11-17). Based on the results of the language analysis section 120, the information location retrieval section 130 determines where the requested items can be found in the database systems 180, and prepares a SQL so that searches can be conducted through the database systems 180 (Col. 7, lines 18-25). As

seen, language analysis section 120 and the information location retrieval section 130 indicates ***a plurality of bridges that translates the user request into*** SQL as ***a format understandable by the*** database systems 180 as ***plurality of content repositories***. The information location retrieval section 130 also obtains necessary information to convert the search results into a format that can be presented to the user and transfers the information to the information retrieval section (Col. 7, lines 25-29). As shown in FIG. 2 is a retrieved data presentation means 10 for transforming information corresponding to the information retrieval request obtained by information retrieval means 40, into a format which can be read by an application software used by the information searcher so as to facilitate processing of the acquired information by the user (Col. 6, lines 18-24). This performs the claimed ***a view services component that processes and converts results content from the plurality of content repositories into a format that is supported by the viewing capabilities of said client API***. Machihara does not explicitly teach the request is to ***update*** and ***add*** to content and metadata properties, and content repositories having ***a plurality of proprietary program interfaces*** to understand to the format of user request. However, in order to access the various database system 180, the middlewares section 150 is used to receive the user request also the database result as in FIG. 3 (Col. 7, lines 39-42). As known in the art, middleware is software that provides a common application program interface such as ODBC or JDBC, and obviously, the user request of sumo-wrestlers as discussed above must be understandable by the middlewares for preparing a SQL so that searches can be conducted through the database systems 180. In

addition, a request for accessing could be a read or write access, a read access is to retrieve the information, and a write access is to add, update or delete information into/from the database. Elmasri discloses the technique of ***adding*** and ***updating content and metadata properties*** by using SQL (Elmasri, Insert, Delete, and Update Statements in SQL). Thus, if a request is a write access, that request could be translate into SQL for adding or updating information. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara system by including a plurality of proprietary program interfaces for understanding the user request, and applying the technique of adding and updating table as taught by Elmasri in order to add, update and search for information in different DBMS systems.

Regarding to claims 2, 15 and 23, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 1, 14 and 22, Machihara further discloses ***an access services component that relays the user request to access content and metadata properties in the plurality of content repositories from said client API to said plurality of bridges*** (FIG. 3, Language analysis section 120).

Regarding to claims 3, 16 and 24, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 2, 14 and 22, Machihara further discloses ***access services component maps metadata properties across the plurality of content repositories*** (Col. 8, line 51-Col. 9, line 35).

Regarding to claims 6, 18 and 26, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 1, 14 and 22, but does not explicitly teach ***a singe bridge corresponds with a single content repository***. However, as disclosed by Machihara, a plurality of middlewares connects to a plurality of database system 180 (FIG. 3). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara system by using each middleware for each database system in order to speed up the process of retrieving information.

Regarding to claims 9, 19 and 27, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 1, 14 and 22, but fails to disclose ***a bridge factory that is configured to generate a new bridge to support each new content repository in the system***. However, as disclosed by Machihara, a plurality of middlewares connects to a plurality of database system 180 (FIG. 3). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara system by including a bridge factory in order to speed up the process of retrieving information.

Regarding to claims 10, 20 and 28, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 1, 14 and 22, Machihara further discloses ***view services component comprises at least one converter that coverts results content into an Internet browser readable format*** (FIG. 3, application software section 160).

5. Claims 4, 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machihara et al. [USP 6,233,578 B1] in view of Elmasri et al. [Fundamentals of Database Systems] and Van Huban et al. [USP 6,484,177 B1].

Regarding to claims 4, 17 and 25, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 1, 14 and 22, Machihara further discloses ***an exchange services server that enables import and export of non-XML content and metadata properties in the plurality of content repositories*** (Information Resource Dictionary 170, FIG. 3), but fails to teach the content repositories in an ***XML format***. Van Huben discloses a plurality of database system with XML format (Van Huben, FIG. 4B). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including the XML document in the database system in order to retrieve a database that contains XML files.

6. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machihara et al. [USP 6,233,578 B1] in view of Elmasri et al. [Fundamentals of Database Systems] and Hobbs [USP 6,523,022 B1].

Regarding to claim 5, Machihara and Elmasri teaches all the claimed subject matters as discussed in claim 1, but fails to disclose ***client API is in a***

format selected from the group consisting of Java, component object model (COM), and web services. Hobbs teaches a system for selecting multimedia information and further discloses a transport layer API such as Java, component object model (COM), and web services (Hobbs, Col. 14, lines 9-20). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including Java, component object model (COM), and web services in API 110 in order to communicate with a remote database server.

Regarding to claim 12, Machihara and Elmasri teaches all the claimed subject matters as discussed in claim 1, but fails to disclose ***each bridge answers client requests via a mode selected from the group consisting of remote method invocation (RMI), Internet Inter-ORB Protocol (IIOP), and extensible markup language (XML) over hypertext transport protocol (HTTP)***. Hobbs teaches a system for selecting multimedia information and further discloses a transport layer API from the groups of remote method invocation, Internet Inter-ORB Protocol, and extensible markup language over hypertext transport protocol (Hobbs, Col. 14, lines 9-20). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including remote method invocation, Internet Inter-ORB Protocol, and extensible markup language over hypertext transport protocol in API 110 in order to communicate with a remote database server.

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machihara et al. [USP 6,233,578 B1] in view of Elmasri et al. [Fundamentals of Database Systems] and Clark et al. [USP 6,442,541 B1].

Regarding to claim 7, Machihara and Elmasri teaches all the claimed subject matters as discussed in claim 1, but fails to disclose ***view services component is an Enterprise Java Bean***. Clark teaches a set of Java Beans for facilitating data extraction from a JDBC-ODBC database (Clark, Abstract). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including an Enterprise Java Bean in order to enhance the view of the search result.

Regarding to claim 8, Machihara and Elmasri teaches all the claimed subject matters as discussed in claim 1, but fails to disclose ***each bridge is an Enterprise Java Bean (EJB) deployed in an application server***. However, as disclosed by Machihara, a plurality of middlewares connects to a plurality of database system 180 (FIG. 3). Clark teaches a set of Java Beans for facilitating data extraction from a JDBC-ODBC database (Clark, Abstract). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including

each Enterprise Java Bean in each middleware in order to enhance the view of the search result.

8. Claims 11, 21 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machihara et al. [USP 6,233,578 B1] in view of Elmasri et al. [Fundamentals of Database Systems] and Clairborne [USP 6,462,833 B1].

Regarding to claims 11, 21 and 29, Machihara and Elmasri teaches all the claimed subject matters as discussed in claims 1, 14 and 22, but fails to disclose ***one processor that processes results content by scaling, rotating, or enhancing an image***. Clairborne teaches a processor that processes results content by scaling, rotating, or enhancing an image (Clairborne, Col. 9, lines 29-55). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including a processor to process an image in order to edit an image file retrieved from an image database.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Machihara et al. [USP 6,233,578 B1] in view of Elmasri et al. [Fundamentals of Database Systems], Hobbs [USP 6,523,022 B1] and Rangarajan et al. [USP 6,185,609 B1].

Regarding to claim 13, Machihara and Elmasri teaches all the claimed subject matters as discussed in claim 1, but fails to disclose ***each bridge accesses its underlying content repository via a mode selected from the group consisting of Java, Component Object Model (COM), and Java Native Interface (JNI) application program interface (API) calls***. Hobbs teaches a system for selecting multimedia information and further discloses a transport layer API such as Java, component object model (COM), and web services (Hobbs, Col. 14, lines 9-20). Rangarajan teaches a system for remote access by invoking a JNI for objects or procedures that are not programmed in Java (Rangarajan, Col. 5, lines 10-14). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Machihara and Elmasri system by including Java, COM and JNI in order to communicate with a remote database server.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Hung Pham
July 15, 2004

SHAHID ALAM
PRIMARY EXAMINER